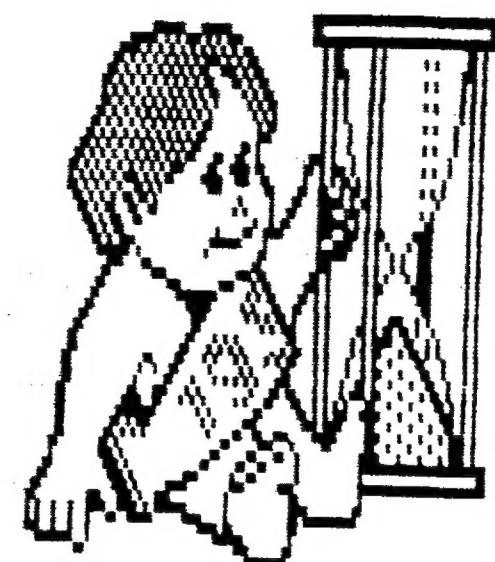
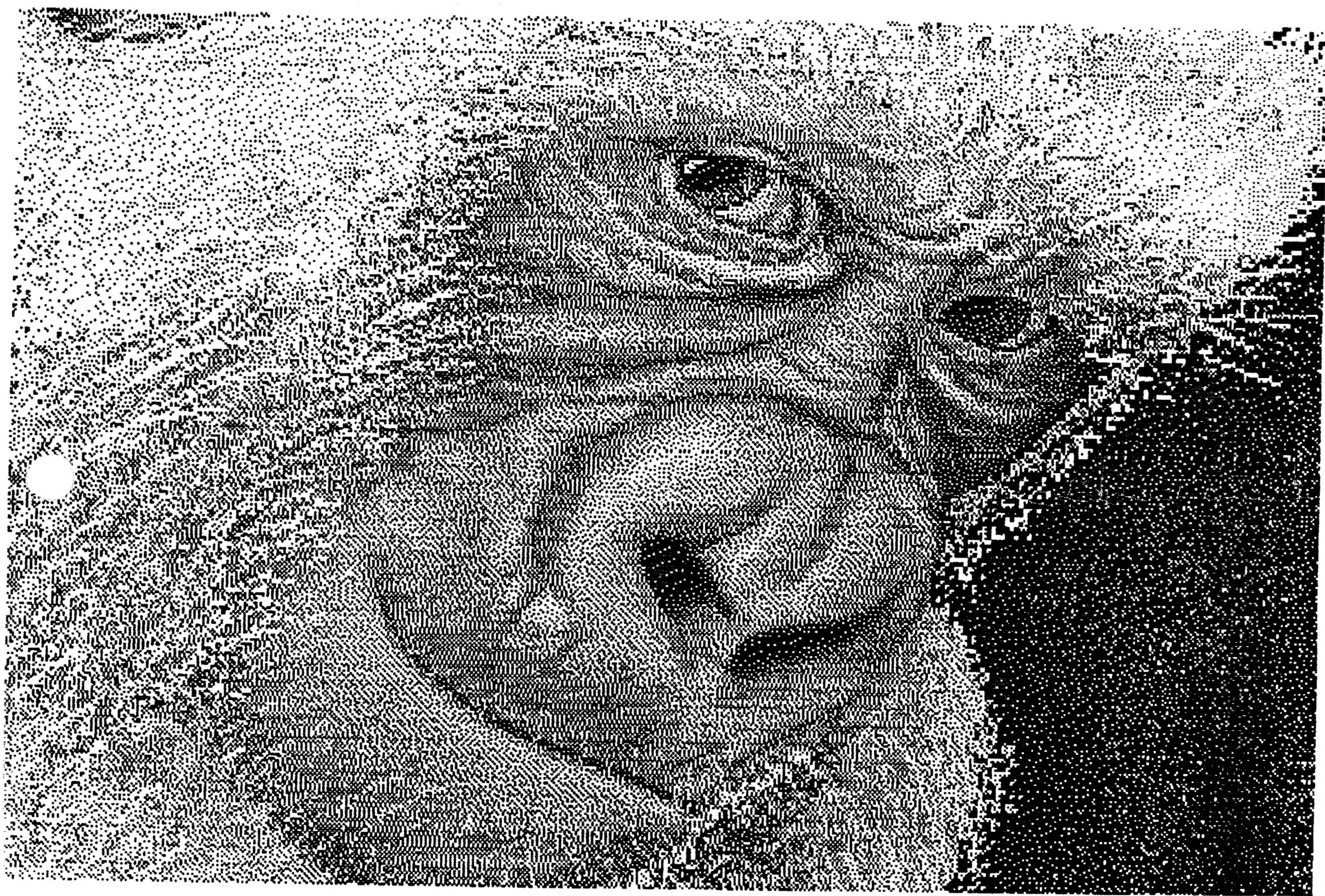




SING-LINK

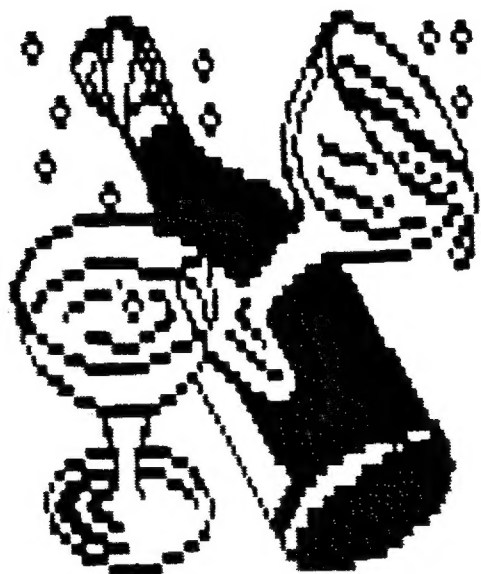


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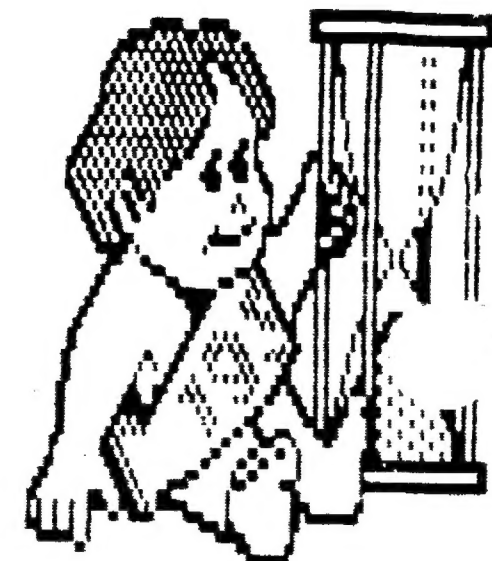


'94 03

**TWELFTH YEAR
ANNIVERSARY ISSUE
TORONTO TIMEX-SINCLAIR USERS CLUB**



SINC-LINK



JAN-FEB '94 VOL 12-1

SINC-LINK IS A PUBLICATION OF THE TORONTO TIMEX-SINCLAIR USERS CLUB AND IS ISSUED 6 TIMES A YEAR. CLUB MEMBERS RECEIVE FREE COPIES AS PART OF THE \$20.00 ANNUAL MEMBERSHIP FEE.

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THE TS2068 & ZX-81 GROUP MEETS ON THE FIRST WEDNESDAY OF EACH MONTH AT 14 RICHOME COURT, SCARBOROUGH, ONT. 7PM START.

THE QL SIG WILL MEET AT 586 ONEIDA DRIVE, BURLINGTON, ONT. 7PM START. NEXT MEETING TO BE ANNOUNCED.

SINC-LINK IS PRODUCED ENTIRELY ON SINCLAIR AND TIMEX-SINCLAIR COMPUTERS.

SEND CORRESPONDANCE TO:

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RICHOME COURT, SCARBOROUGH,
ONTARIO, CANADA M1K 2Y1.

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TORONTO TIMEX-SINCLAIR USERS CLUB

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SINC-LINK

TORONTO TIMEX SINCLAIR

USERS CLUB STATS

JAN TO DEC 93

DATE	NM	RM	US	CAN

JAN 14	21	8	21	8
FEB 4	2	1	2	1
MAR 2/5	9	6	11	4
APR 9	1	6	2	5
MAY 6/14	1	6	6	1
JULY 9	3	5	3	5
AUG 5	2	5	6	1
SEP 2	0	2	2	0
ODT 7/19	2	2	1	3
NOV 10	0	2	1	1
DEC 30	1	0	1	0

TOTALS	42	43	56	29

CODE: NM=NEW MEMBER				
RN=RENEW US=USA				
CAN= CANADA				

THE NEW YEAR HAS ARRIVED.
HERE ARE SOME STATISTICS ON OUR
CLUBS MEMBERSHIP FOR 1993.

RECORDS ARE MAINTAINED BY SYMBOLS SUCH AS
(US) FOR UNITED STATES AND (CAN) FOR
CANADA THESE ANNUAL STATS BEGIN
JANUARY AND END, THIS YEAR ON DECEMBER 30.
OUR AMERICAN MEMBERSHIP IS DOUBLE THAT
OF OUR CANADIAN.

NEW MEMBERS (US) 29.
NEW MEMBERS (CAN) 6.

RENEWAL MEMBERSHIPS
US 21, CAN 19.

IN JANUARY 1993 HUGH HOWIE, OUR GL
LIBRARIAN PUT ON A DRIVE FOR NEW
MEMBERS, PRIMARILY FOR GLers.
THE REPOSE WAS TERRIFIC. HUGH SAID,
"THEY'RE OUT THERE" AND WENT ON TO
PROVE IT. HUGH TAKES HIS TASK VERY
SERIOUSLY. HE'S THE GUY WE LOOK TO
FOR GL INFORMATION.
THE OUT OF TOWNers ARE VERY MUCH
AWARE OF GEORGE CHAMBERS AND HIS
INTEREST IN AND KNOWLEDGE OF THE
2068 MACHIONE. GEORGE HAS GIVEN
MANY YEARS TO THE CLUB. THERE ARE
FEW AREAS OF RESPONSIBILITY THAT
HAVE NOT COME UNDER HIS
'NEEDED ASSISTANCE'.

JEFF TAYLOR, NEWS LETTER EDITOR,
TOOK OVER THE DUTIES OF PRESIDENT
WHILE THE PRES, RENE BRUNEAU WENT
BACK TO SCHOOL TO LEARN
!! MORE COMPUTING !!

I HAVE STRAYED FROM JUST REPORTING
STATS. ON THE OTHER HAND, PEOPLE
WHO MAKE THE CLUB WORK ARE STATS,
RIGHT, INCLUDING CONTRIBUTORS.
RIGHT!

REGARDS W K (BILL) LAWSON

DID
YOU
KNOW
?

I recently recieved a phone call from Bob Swoger to give me a way to solve a problem that I had written about in one of my newsletter articles. He helped me with that and sent me a copy of his LogiCall disk for my evaluation. It is a very interesting program and includes several clever files as a part of the suite of programs. One of them is a way to keep track of where each of his disks are in his disk files. (He says he has over 400 disks!)

Seeing this program made me realize that I had tried to solve a similiar probem in a different way. I was always wondering where I had disk space available. Cataloging disk after disk to find enough space to file something drove me to the following solution. I realize that this could be a database application, but I wanted to have a single page with this information on it.

I am a MScript fan so I have a MScript file loaded in my RAMdisk called freblk.CT. It contains two columns with the following information:

disk number
blocks free
description of contents

I have used the Add feature to bring in my current file below as an example. The \$ signifies that it is a Spectrum disk. The catalog to text feature in MScript allows me to call up the freblk.CT file and then catalog any new disks or revised disks. I often put several catalogs in the text then Block delete every thing between the disk number and the free blocks message. I update the appropriate disks and the delete the catalog messages.

I have about 100 5 1/4 disks and 24 3 1/2 disks and the printout fits on one page. This scheme would probably be awkward for Bob's 400, but it is a simple solution for me.

It allows me to find a disk by description and locate where I have space available.

SAMPLE

00	00	Larken Utilities	50	19	Ramdisk RBAKUP
01	02	Chambers Utilities	51	02	GFC Sinc-Link
02	05	Disk Index	52	01	b/u of 66
03	03	Utilities	53	00	DSDD Omnibus
04	22	Tasword 2+	54	47	DB, cmpres
05	12	MScript	55	56	
06	01	Adventure Programs	56	77	
07	55	Timachine work disk	57	16	Assmblr/dissmblrs
08	07	Games	58	01	Interbank Database
09	00	Best Business/Utilit	59	00	\$ Languages
10	34	\$ Beta Basic/Utilit	60	47	misc
11	04	\$ Tape A Games	61	77	
12	03	\$ Adventure games	62	15	Single drive disk
13	02	\$ Tape copiers/Util	63	77	
14	00	\$ Combat games	64	05	\$ misc. b/u

Les Cottrell

Cocoa, FL

Tony Blizzard
512 E Court, Welser, Ida. 83672

My son, Ron, tells me that the QL supporting journals need articles on QL use and that, since I'm a heavy user, I should write some. Okay. But most of you are computer buffs; I'm not. The QL is the only computer I've ever used, excepting a couple hours playing with a Timex-Sinclair. When my sons advised me to get one of those "super-buy" QL computers I asked, "What do I need with a computer?" With a little argument they convinced me that if I only used the word-processor it beat my WD-40-soaked IBM Selectric every way imaginable. Turns out they were right. That is, after I nearly beat the thing to death learning Quill (old dog, new tricks situation). And I went through the same trauma with Text87. (This is a Text87 doc.)

Materially, my mind works on mechanical and electrical logic; not computer logic. Therefore, after I read a new program's manual I call Ron to find out what it means. He's developed into quite a translator.

My present hardware amounts to a Magnavox RGB monitor, 896K Trump Card, dual 5 1/4 Mitsubishi discs from Sharp, a Seikosha SP 1200-AS 9 pin and an Epson LQ-500 24 pin printer and a back-up QL with a monochrome monitor. The Seikosha just prints mailing labels these days; the 24-pin doing the heavy work. I picked up a cheap Tandy A/B switch to put between them and made up a cable from switch to serial 1. Both lights of the *a#!çø disk drivers come on every time a floppy is called, always have; Stuber wasn't very anxious to help fix it and it still drives me nuts. Otherwise, I'm happy. (Ron has about talked me into networking the backup QL; might be fun.)

Software? More than I use. Taught myself Quill and Archive out of the originals. Ron bought me Taskmaster; so far it's mastered me. (But I hope to write its "screen saver" into every boot I have!) Bought Stuber's early version of Xchange and have had to learn to

use it for its mail-merge feature, which use I will describe herein. Also have Bill Cable's Archive enhancements and like what I've used very much but for the awfully slow screen changes.

Following is one layman's use of the QL:

As mentioned, I was interested in a good typewriter - Quill. It soon made the old way comparable to chiselling stone. And, until someone writes a mail-merge for Text87, I'll continue to use it for special purposes. Being politically oriented, if I'd had Quill 25 years ago, a lot more politicians would have had to make a lot more excuses concerning their actions.

Being, at the time of my QL purchase, maintenance manager of a good-sized vending machine business, I soon saw the advantage of a machine data-base for the whole operation and began spending my evenings typing in data for every machine in the business. My crew groaned when I first exposed them to the print-outs, but soon they were looking for updates of equipment on locations to help their preparations for repairs, etc.

Next, two of my sons turned their correspondence into a magazine and I got elected to keep the address data-base - now up to about 1400 names.

Have also developed my own six-page or so monthly(?) mail-out sheet (Text87 produced) and regularly update its address data-base.

Lastly, I run an irrigation-ditch lateral in our part of town 7 months of the year and my wife has now become secretary-treasurer. A tax bill must be sent to each address on the ditch-line each year. In the past the secretary had triplicate legal forms printed, crash-numbered and bound at considerable cost. Then she had to laboriously hand-enter all the information for each address.

Last year I used Xchange's mail-merge feature and set up the whole bill on an 8 1/2 X 11 sheet in Quill; then

created an Archive data-base to hold each lot's detailed info. This entailed looking back through years of dusty records and making trips to the county assessor's office to find the answers to riddles caused mainly by individualistic penmanship.

To create a form including all the necessary legalisms on one sheet really challenged Quill's versatility. (Samples are provided if the publisher has display space.) I could never have managed it without Quill's ability to use custom translates in the printer_dat. Happily, I had made drivers beforehand using translate codes (as shown by Mike de Sosa in an article from an old Time Designs) to take advantage of the LQ-500's founts.

When it came time to merge the data into the form most everything had to be jockeyed around some more. Through frustrating trial and error I discovered that the Xchange mail-merge only worked so many lines down the page. Because the tax-payer tear-off payment stubs had to be at the bottom of the sheet and had to carry the same number as the main bill, this meant that I couldn't merge bill numbers I had set up in the data-base. Finally I used a manual numbering machine. However, Ron recently brought his new public domain, updated, Xchange and we discovered (just before my QL's original membrane, as well as that of the back-up, decided to quit) that that problem has been corrected. This year's bills went out with the numbering merged perfectly.

To have everything align properly on the merged sheet I discovered that I had to allot the proper number of spaces on the doc (even though it pushed things out of place in the Quill template) and then be sure to fill every space of every field in the database. That meant a lot of spaces run into the 31 fields on the Archive screen I had created.

During the course of all this research and set-up I discovered that through the passage of time, selling off

of parcels, etc., the ditch tax had lost much of its equity. So before the 1993 billing this cantankerous old dog attacked Abacus hoping to equalize the tax-base per square foot. But after learning its basics, I found it easier to use a calculator. Seems that, given length & width, Abacus could figure square footage of each lot, but I know zilch about math formulas and programing. Maybe someone can explain to me how to set up Abacus to do that job in the future.

Last year I printed the bills on continuous feed paper. This time I used a cut-sheet feeder. One seems to work about as well as the other although the cut-sheet eliminates the extra time needed to tear all the perforations.

By the way, a local programmer wrote a special PC program for another ditch-lateral company in town which went on computer a year before us. They still have a glitchy situation with botched bills while, except for the manual numbering - now corrected - our bills printed out without a hitch first time out.

Don't know if this is what QL publications need, but this is how I use my QL. As for the technicalities of how some of the objectives are accomplished - I tend to forget the details until I have to do it again. Then re-reading the manual usually refreshes my memory.

Again, I'm not a computer buff, never ran a PC, but I know a useful tool when I see it operate. Now when the grandkids play the simple Quanta library games on my QL, I get nervous. And when the membrane gave up I wasn't sure how life would progress. Luckily, Frank Davis of Mechanical Affinity had me fixed up with new-production membranes in just two days. Real service!

Hey, when the QL "died" I was too busy using mine to attend the funeral.

- end -

MIDDLE WEISER IRRIGATION LATERAL DISTRICT

NOTICE OF TAXES

TAX LEVY FOR 1993

No.*num*

Weiser, Idaho, November ,1993

firstname *lastname*

street

city, *state* *zip*

careof

Please take notice that your taxes for the
year 1993 on the below described property
amount to the sum of

writtenamnt DOLLARS \$*amnt*

DESCRIPTION OF LANDS				AMOUNT AND DISTRIBUTION	
description1	*lot1*	*b*	Lot	Blk	Apportionment
					Total Tax \$*amnt*
description2	*lot222*	*b2*			1/2 Pd. 1993
description3	*lot3*	*b3*			Balance Due
					Penalty
					Advertising
					Total Paid \$

THE FOLLOWING TAXES ARE DELINQUENT ON ABOVE PROPERTY

Year	Tax	Interest	Amount
yr	*tax*	*in*	
December, 1993,			
y2	*tx2*	*i2*	
on or before			
said			
y3	*tx3*	*i3*	
ll become			
delinquent			

IMPORTANT - Notice is hereby given that the assessments above indicated
are due and payable at the office of the District, same being the home
of Barbara Blizzard in Weiser, Idaho. Said assessment will become de-
tot lipient at 6:00 o'clock p.m. on the third Monday of

provided that if one-half of the same shall be paid

date, the remainder may run without interest but wi

if not paid on or before 6:00 o'clock p.m. on the third Monday of June,
1994. A penalty of two percent will be added to all delinquent assess-
ments and an interest charge of ten (10) percent per annum from January
1st will accrue until settlement. THESE AMOUNTS ARE SET BY LAW.

Make remittance payable to: BARBARA BLIZZARD, Secretary

512 East Court, Weiser, Idaho 83672

If the owner's name is not correct
please indicate below:

Present Owner _____

Address _____

MEMO:

Secretary

Your cancelled check is your receipt

FOR PROPER CREDIT CUT AND RETURN THIS PORTION WITH PAYMENT; FOR PROPER CREDIT CUT AND RETURN THIS PORTION WITH PAYMENT

No.*num*

1993 ; No.*num*

1993

FULL OR FINAL PAYMENT

FIRST INSTALLMENT

_____, 19____

_____, 19____

Barbara Blizzard, Secretary
12 East Court, Weiser, Idaho

Barbara Blizzard, Secretary
512 East Court, Weiser, Idaho

MIDDLE WEISER IRRIGATION LATERAL DISTRICT

NOTICE OF TAXES

TAX LEVY FOR 1993

No. 105

Weiser, Idaho, November , 1993

Mary Anderson
434 E Court
Weiser, ID 83672

Please take notice that your taxes for the
year 1993 on the below described property
amount to the sum of

Thirty-five----- DOLLARS \$ 35.00

DESCRIPTION OF LANDS			AMOUNT AND DISTRIBUTION	
	Lot	Blk	Apportionment	
Hanthorn Add'n.	14-15	4		Total Tax \$ 35.00
140' X 100' 14000 sq'				1/2 Pd. 1993 _____
				Balance Due _____
				Penalty _____
				Advertising _____
				Total Paid \$ _____

THE FOLLOWING TAXES ARE DELINQUENT
ON ABOVE PROPERTY

Year	Tax	Interest	Amount

IMPORTANT - Notice is hereby given that the assessments above indicated are due and payable at the office of the District, same being the home of Barbara Blizzard in Weiser, Idaho. Said assessment will become delinquent at 6:00 o'clock p.m. on the third Monday of December, 1993, provided that if one-half of the same shall be paid on or before said date, the remainder may run without interest but will become delinquent if not paid on or before 6:00 o'clock p.m. on the third Monday of June, 1994. A penalty of two percent will be added to all delinquent assessments and an interest charge of ten (10) percent per annum from January 1st will accrue until settlement. THESE AMOUNTS ARE SET BY LAW.

Make remittance payable to: BARBARA BLIZZARD, Secretary
512 East Court, Weiser, Idaho 83672

If the owner's name is not correct
please indicate below:

Present Owner _____

Address _____

MEMO:

Secretary

Your cancelled check is your receipt

FOR PROPER CREDIT CUT AND RETURN THIS PORTION WITH PAYMENT; FOR PROPER CREDIT CUT AND RETURN THIS PORTION WITH PAYMENT

No. 105

1993

No. 105

1993

FULL OR FINAL PAYMENT

FIRST INSTALLMENT

_____, 19____

_____, 19____

Barbara Blizzard, Secretary
512 East Court, Weiser, Idaho

Barbara Blizzard, Secretary
512 East Court, Weiser, Idaho

Enclosed find \$_____ in Final and Full
payment of taxes levied for the year 1993 on
the property described in the Tax Notice bear-
ing the same number and year as this stub and
from which this stub has been detached.

Respectfully,

Enclosed find \$_____ in payment of
the First Installment of taxes levied for the
year 1993 on the property described in the
Tax Notice bearing the same number and year
as this stub and from which this stub has
been detached. Respectfully,

TURBO SWITCH For The ZX81

by Tony Willing, Vashon, WA
Transcribed from the Winter 1993 issue of ZXir QLive Alive.

The whole idea of experimenting with a "TURBO Switch" came from reading the book "EXPLORER'S GUIDE TO THE T/S 1000" by Mike Lord. On page 58(1) of the book under the heading "Keyboard Scanning" he tells how the system variable MARGIN may be changed from 55 to 31 by taking pin 22 of the ULA chip HIGH or LOW. This is supposed to be of use to the computer manufacturer to enable the T/S 1000 to be used in either the USA which uses 31 blank lines at the top and bottom of the screen, or in the UK which uses 55 blank lines. The book also states on page 52(2) under the heading "NMI Handler" that "When in the SLOW mode the ZX81 uses the time occupied by these blank lines to carry on with your program".

So I thought if I increased the number of lines on my T/S 1000, I might increase the speed of program execution. And it works well. I use direct video and have not tried it using the RF modulator, but if you use direct video I think you will have success from the modification.

To test the speed of program execution I use the following BASIC program:

```
10 FOR N = 1 TO 500
20 NEXT N
30 PRINT "FINISHED"
```

With pin 22 HIGH the computer takes 20 seconds. () the pin LOW, the program takes 28 seconds. (About a 28% increase in speed. Don). This is a considerable increase in speed. One might ask "Why have a TURBO Switch?" Well, when I use my WORD^z program (word processor) at the "TURBO" speed the cursor plinks at about twice the normal rate and does not seem to miss keys as it did in the past, and when playing games I use the slower speed so that I can get a higher score!

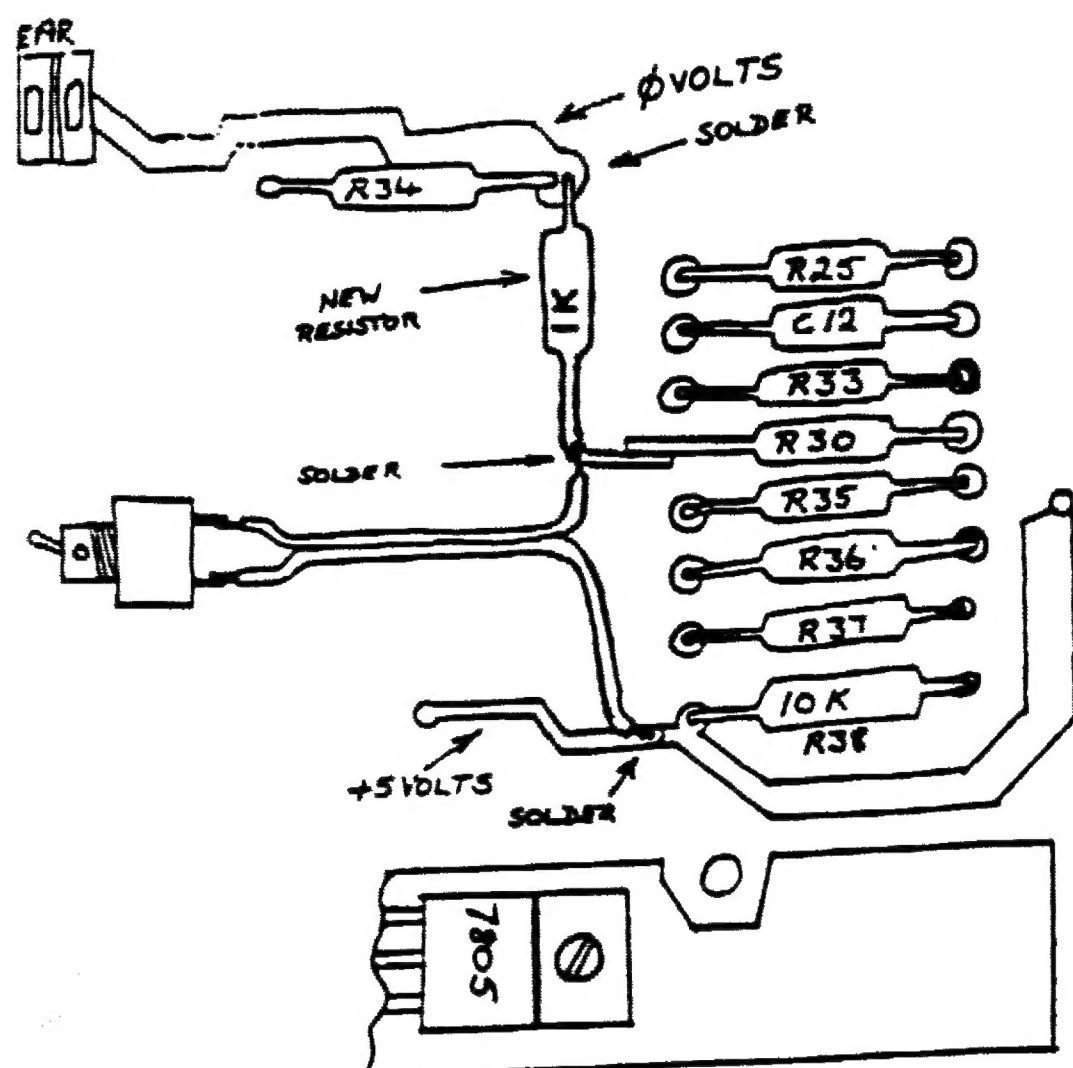
When using the higher speed I find the monitor screen is filled with lines from top to bottom, when using the slow speed I find a blank screen at the top and bottom 1/2 inch of the screen. I can switch from "TURBO" to normal at any time without any crashes.

Lastly, how is the modification carried out? You have to take the T/S 1000 circuit board out of it's case and locate resistor R30 which is located between the ULA chip and the regulator heat sink. It should have the colors Brown Black Brown.

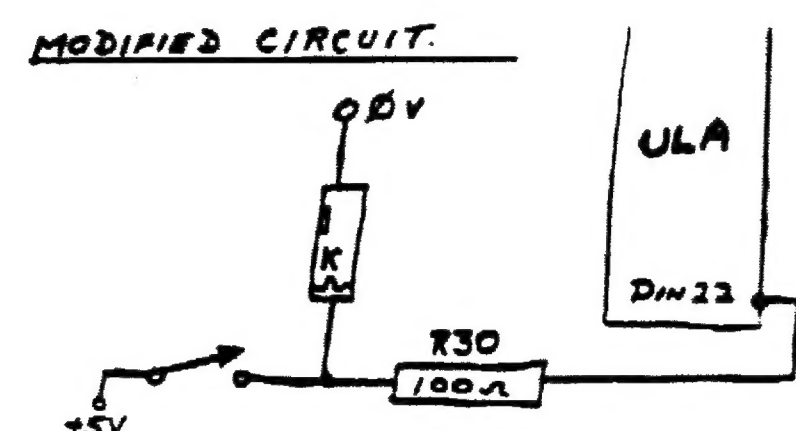
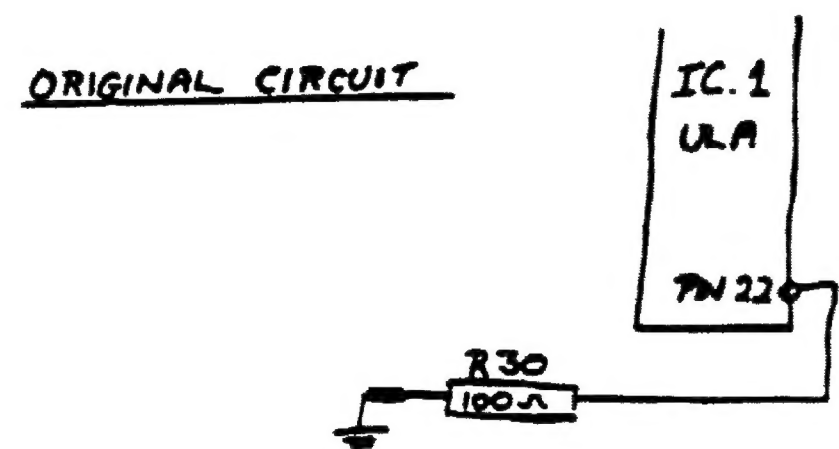
Using a soldering iron, lift the left hand end of the resistor clear from the circuit board hole. Also locate resistor R38 which is four resistors down from R30, and solder one end of some two core cable to the left hand end of R38, which should be a 5V rail. To the raised left hand end of R30, solder one end of a 1K 1/4W resistor. Bend the resistor upwards and solder the other end to the right hand end of R34, which is a 0V rail. To the junction of R30 and the added 1K resistor solder the other core of the two core cable. to the other end of the cable solder a switch of the single throw single pole type.

That completes the circuit board modification. Try connecting a multimeter to the solder connection between R30 and the 1K resistor, and ground. When the T/S 1000 is powered up, the "TURBO" switch should change the voltage from nearly 0 volts to nearly 5 volts, and if you have your monitor connected you should see the screen flicker.

The switch should be mounted somewhere convenient, accessible from outside the T/S 1000. I have my T/S 1000 mounted inside a steel chassis and so I mounted the "TURBO" switch on the front panel with the words "TURBO" and "NORMAL" along side the switch. Try ENTERing and running the program that I LISTed earlier and see the difference the switch makes. ENJOY!



PARTS REQUIRED.
1 x SP/ST SWITCH
1 x 1K 1/4W RESISTOR
1 x RIBBON CABLE (6"LC)



TS2068-LARKEN TIDBIT
by G. Chambers

Here is an interesting thing I did with my system in recent days. It may prove useful to some of our members.

I had typed up a letter, using the word processor MSCRIPT. While attempting to print out the letter I inadvertently did something to the computer which caused it to lock up. I was not able to release it. The NMI-A key function did nothing. What a quandary. I was not looking forward to re-typing the letter.

I was sure that the material I had typed was still in the computer. So when all else had failed I saved the whole of the computer RAM memory, starting at the screen, to a Larken disk, using an NMI-type save. This gave me ten tracks on a disk.

I then loaded the "doctor.B1" program (on TTSUC library disk #1), and used two of it's options to find the tracks that contained my typing. First I used the option which told me what programs were on each of the tracks of the disk. Then using option "D" I loaded the tracks likeliest to hold my data. I found the letter on tracks 7 and 8 of the NMI-Save. Though actually on tracks 34 and 35 of the disk. Do you follow me?

Now, the option "D" told me that the first track with text was loaded into the computer, starting at address 50000, and was 5090 bytes long. I "broke out of the "doctor" program and did a save of that part of memory holding the track. Although the track was loaded into memry starting at 50000, I knew that the first 24 bytes were concerned with information about the file; that the actual data started at 50024. So I did a save of code; PRINT USR 100: SAVE "lost1.CM" CODE 50024,5090. The ".CM" suffix was used since my version of MSCRIPT uses this suffix.

I did the same thing for the second track. Loading the second track containing text and saving it, this time using the command PRINT USR 100: SAVE "lost2.CM" CODE 50024,5090.

I then installed MCR IPT in the 2068, loaded the first track, and then merged the second track. Note that with MSCRIPT (Dohany's version) you use the Add option to merge a file.

Everything was back in MSCRIPT, except for a missing word between the two files. There were a few lines of superfluous garbage which were easily removed. I was struck with how easy it was. The seventh track of a 10-track Larken NMI-type save starts at address 46924, while MSCRIPT stores text starting at address 469247. That's called serendipity.

And if you are curious as to the the meaning of "serendipity", the dictionary describes it as 'the faculty of finding valuable or agreeable things not sought for'. How apt!

I'm sure many of us utilize our computers as an aid in pursuing another hobby. Perhaps you have an astronomy program to plot star and planet positions for your sky viewing. Or maybe you have an interest in stamps or coins and use a database in cataloging your collections. My "other" hobby is collecting sports games - the table-top, board games that generally use dice, charts and cards to represent real or imaginary athletes and teams. Probably all of us have seen games of this nature, football or baseball most likely, but there actually are games representing nearly every sport.

My own collection has grown to over 200 games, starting with the classic Cadaco All-Star Baseball game when I was about ten or so. Over the decades since, I've accumulated games in just about every sport, with a special emphasis on obscure, limited production games. With a collection that grows with every new game that I can find, I've found it convenient to catalog them, but rather than use a database such as Pro/File or Vu-File, I just list them by sport in an MSCRIPT file. For my purposes, at least, a word-processor makes a superior database, especially with respect to ease of typing, editing and hard copy formatting.

"Merging" my two hobbies goes beyond just cataloging my collection, however. From the time I got that first T/S 1000 back in the early '80s, I realized that a computer could actually help me play the games. Like many computer users, game players tend to "tinker with the hardware", modifying the original, perhaps adding features that are either missing or not handled to the owner's satisfaction. As a matter of fact, quite a few games have originated from this feeling of "I can do it better". Many of these were one shot efforts, produced with great expectations of challenging the long-dominant leaders in the sports game field, such as APBA and Strat-O-Matic, but then burning out rather quickly when confronted with the harsh reality of high production costs and expensive advertising. In spite of their defunct status, however, these "one-man show" games are among my favorites.

Several times I've also tried my hand at creating games from scratch, once even with a vague idea of actually producing a hockey game for sale. Looking back on that '70s idea seems a little amusing now, since I knew only a little about hockey and even less about the mechanics of game production and marketing.

When I got the T/S 1000, however, the idea of creating my own games was replaced almost immediately by the realization that the machine could help me play the game that I was focusing on at that time, a boxing game produced by Avalon Hill called "Title Bout". It might sound odd, but I've actually played the games in my collection very little, many not at all, content just to look at them occasionally. Many gamers, on the other hand, conduct solitaire season replays for their favorite baseball team, for example, compiling comprehensive statistics.

For myself, the time investment in such a project always seemed prohibitive, so the appeal of a game representing boxing might seem understandable: only two fighters to deal with at a time, few statistics and a short contest. Added to that was the fact

that "Title Bout" was extremely well done - very playable, realistic and accurate, and most importantly, a lot of fun. I spent hours playing hundreds of fights, mostly the great heavyweights of boxing history.

The computer was a natural for this game. Unlike many other sports games, the necessary random number generator was not dice, but rather "action cards" from which one took a reading to determine what was occurring in the ring. The deck of 80 cards represented two rounds, each card being used once then discarded. Even though I felt that action cards had an advantage over dice in terms of speed and play flow, it was still somewhat of a hassle shuffling the deck after every two rounds, especially to make sure that cards didn't stick together thereby compromising randomness. Enter the computer and a rudimentary grasp of Basic. My first program was simply to display a "card" on the screen, mimicking the deck. Read a "card", press enter for the next one, and repeat 40 times per round. My first departure from this literal reproduction of the deck was to realize that more than one reading could be taken from the screen "card". The physical deck had several categories on each card - different random numbers that might be used for determining who was in control of the action or if a punch had been landed, for example, but only one reading could be used from each card, for randomness' sake. Each "reading" on the computer card, however, was independent of the others on the same card. By taking several readings at a time, I was able to cut down the number of <ENTER>'s from 40 to about 15 per round. But what the computer giveth it also taketh away: the machine needed to know when exactly 40 readings had been used in order to end the round and I was required to tell it!

As the months passed and my programming knowledge increased, I was able to go beyond this very elementary presentation of one aspect of the game, the action card deck, and incorporate other elements. A few lines to display the fighters' names and scores, for example, were added to the program to eliminate the need to move markers on the actual gameboard. Again, however, I had to input this information, so the net work/time saving was minimal. The fact that more and more of the game was going onto the screen did please me, though.

At about this time I was corresponding with a man in Iowa concerning an article I had written for a game magazine on Title Bout boxer ratings. I mentioned that I had a new little computer and that I was attempting to program the game. He was intrigued to the point of wanting to purchase a T/S 1000 just to see my effort. Unfortunately he couldn't find a 1000 and instead bought a Commodore 64 and immediately typed in my program (from a 2040 printout - that takes both patience and good vision!) and began making suggestions for improvements.

One idea he expressed struck me as both desirable and naive - he saw no reason the entire game couldn't be computerized. I, on the other hand, saw plenty of difficulty in achieving such a goal - the number and complexity of charts in the game depicting events such as cuts, knockdowns and so on as well as our amateur status as programmers discouraged me from seeing the idea as viable.

Our correspondence eventually ended as did a lot of my interest in programming Title Bout. Over the next few years, I was constantly working on some game or another with respect to the computer but I had pretty much taken TB as far as I thought I could - the game was probably 95% autoplay at that point, requiring only an occasional input. I couldn't just choose two boxers, start the program and come back 10 minutes later for a decision because, sure enough, about the fifth round some obscure condition would require human input. Since I was playing the game so little, this situation didn't really bother me much.

About this time, my brother in Arizona bought his first computer, a 286 clone. Doug doesn't share my interest in games but thought it might be fun to translate the TB program to GW Basic as a project we could work on during one of my semi-annual visits. I mailed him the 2040 printout of the program a couple of days before I flew in, assuming we would spend most of the time just re-typing it, but was astonished to find he'd entered the whole thing, even going so far as to figure out how to correctly translate Sinclair basic in many cases. With the drudgery out of the way, we worked on things like screen presentation and the use of color graphics. But Doug's real contribution was to encourage us to go ahead and try to incorporate the last few elements of the game that would make it truly an autoplay game. He had a lot of good ideas, especially considering the fact that he'd never even seen the board game, relying on my description of it. It took us all of my vacation, two weeks, but we did finish it. I came home with the completed program on a Citizen 200-GX printout, ready to type the new changes back to my TS and even more ready to go out and buy an 80 column printer! I did both I'm happy to report and not long after added a disk drive to complete my system.

I don't see much being added to the program in the future and I doubt that I'll play the game very often, but I would certainly be glad to share the Title Bout program with anyone interested enough to send a cassette or disk (Larken) to: Mike Stephens, 312 Newton Avenue, Oakland CA 94606-1320.

INSTRUCTIONS FOR BOXING:

My attempt to translate Avalon-Hill's boxing board game, Title Bout, into Sinclair Basic consists of two versions of the program: BOX08.BH is the regular program while QBOX.BH eliminates all screen display to provide a faster, result-only outcome. A ten round bout that normally takes 11 minutes or so can be run off in about six with QBOX.

The game has four screens in addition to the opening credit screen. They are:

1. "Boxer Choice Screen": 20 all-time heavyweight boxers may be chosen by letter. <AUTOPLAY> allows you to watch or walk away. The bout proceeds to conclusion with no input necessary. <CONTINUE> requires a keypress at various times, such as the end of the round, after a knockdown, etc.

2. "Round Screen": shows each boxer's style, (S)lugger or (B)oxer. Important ratings are displayed:

CF: control factor; ability to control the fight
PL: punches landed; punching accuracy modified by opponent's defense
HP: hitting power
KDR: tendency to be knocked down
HV: hit value; ability to land stronger punches

Higher ratings are better except for KDR. When a fighter becomes tired a "t" shows before his name and his HP and PL ratings are decreased by one each round.

3. "Action Screen": shows punches landed & missed, fouls, clinches, knockdowns, etc. Cuts are described when they happen then coded by letter (A-I) and round number. To see a description of all cuts, break into the program and check lines 6720-6800. Total points from punches landed in the round appear to the right of the name. (AGG) gives 1 point to the higher aggressiveness rating (if any). On a Knockdown or 5 point punch, Killer Instinct (KI) will be shown at the top - the boxer landing the big punch will retain control until KI disappears. The timer showing the round and count is at the bottom right; the count decreases from 40 (this could be converted to a digital clock if anyone is interested. In the board game 40 cards constitute one round). The length of a bout is set at 10 rounds but that too could be altered.

4. "Score Screen": displays controls won, punches landed and missed, and points from punches landed for the round completed and the fight. Judges' and referee's scoring is not shown until the bout is over but "My" score provides an objective (though unofficial) analysis based strictly on who scored the most points in the round. The officials' cards may not agree! Scoring is on the 1 point must system. Knockdowns for are shown under "K's" and cuts (if any) are shown in coded form. TKO/condition information is displayed if pertinent.

I would be happy to correspond with anyone regarding this program, including adding other fighters and providing options for a clock, bout length and other scoring systems. A 64 column version utilizing Taswide is also available. For those with IBM compatible computers I highly recommend the game "TKO Pro Boxing" by the creator of Title Bout and a professional programmer. Hundreds of boxers are included and a running commentary adds a great deal to the game, available from Lance Haffner Games.

Please send questions and comments to: Mike Stephens, 312 Newton Avenue, Oakland CA 94606-1320.

The Larken disk version of this game is available in the TTSUC disk library. Ed.

name	Dec	Hex	Instr-Dec	Remarks (9)	name	Dec	Hex	Instr-Dec	Remarks
	3011	0BC3	LD HL, (8236)			3191	0C77	LD C, 9	
	3014	0BC6	LD DE, 8329			3193	0C79	LD A, (HL)	
	3017	0BC9	LDIR			3194	0C7A	RST 16	
	3019	0BCB	CALL 1135	; encdbf		3195	0C7B	INC HL	
	3022	0BCE	CALL 3651	; savebf		3196	0C7C	DEC C	
	3025	0BD1	CALL 1084	; ldbuf		3197	0C7D	JR NZ, 3193	
	3028	0BD4	LD A, (8224)	; errnu		3199	0C7F	INC D	
	3031	0BD7	AND A			3200	0C80	INC HL	
	3032	0BD8	JR Z, 3064			3201	0C81	LD C, 0	
	3034	0BDA	LD A, (8223)	; attempts counter		3203	0C83	LD A, (HL)	
	3037	0BDD	DEC A			3204	0C84	CP 249	; end of block
	3038	0BDE	LD (8223)	; attempts counter		3206	0C86	JR Z, 3216	
	3041	0BE1	AND A			3208	0C88	CP 255	; end of track map
	3042	0BE2	JR NZ, 3001			3210	0C8A	JR Z, 3216	
	3044	0BE4	LD HL, (8245)	; temp6		3212	0C8C	INC C	
	3047	0BE7	LD (HL), 245	; block in use		3213	0C8D	INC HL	
	3049	0BE9	INC HL			3214	0C8E	JR 3203	
	3050	0BEA	LD (8245), HL	; temp6		3216	0C90	LD B, 3	
	3053	0BED	LD A, (HL)			3218	0C92	LD A, 32	
	3054	0BEE	CP 249	; name end		3220	0C94	RST 16	
	3056	0BF0	JP Z, 2424			3221	0C95	DJNZ 3219	
	3059	0BF3	LD (8221), A	; curtrk		3223	0C97	LD A, C	
	3062	0BF6	JR 2996			3224	0C98	PUSH HL	
	3064	0BF8	LD HL, (8245)	; temp6		3225	0C9A	PUSH BC	
	3067	0BFB	LD A, (8247)			3226	0C9A	CALL 1781	; decdmp
	3070	0BFE	CP 100	; d		3229	0C9D	POP BC	
	3072	0C00	JR Z, 3110			3230	0C9E	POP HL	
	3074	0C02	INC HL			3231	0C9F	DEC HL	
	3075	0C03	LD (8245), HL	; temp6		3232	0CA0	DEC HL	
	3078	0C06	LD A, (HL)			3233	0CA1	LD A, 32	
	3079	0C07	CP 249	; name end		3235	0CA3	RST 16	
	3081	0C09	JP Z, 2424			3236	0CA4	RET	
	3084	0C0C	LD (8249), A			3237	"Disk Contents"		; <pointer @
	3087	0C0F	LD HL, 8249			3253	"Disk Name :"		; <pointer @ 3283
	3090	0C12	LD A, (8221)	; curtrk	PRINT	3266	0CC2	LD A, 2	
	3093	0C15	CP (HL)		LPRINT	3268	0CC4	LD HL, 4656	; 2068
	3094	0C16	JR Z, 3104			3271	0CC7	LD DE, 5633	; Spectrum
	3096	0C18	CALL 3807	; nexttrk		3274	0CCA	CALL 1046	; roms
	3099	0C1B	LD HL, 8249			3277	0CCD	LD A, 245	; block used
	3102	0C1E	JR 3090			3279	0CCF	RET	
	3104	0C20	CALL 2860		CAT	3280	0CD0	CALL 3266	; print
	3107	0C23	JP 2981			3283	0CD3	LD HL, 3253	; "Disk Name :"
tranok	3110	0C26	LD HL, (8245)	; temp6		3286	0CD6	CALL 1925	; print to
	3113	0C29	INC HL			3289	0CD9	CALL 1212	; drv0
	3114	0C2A	LD (HL), 249	; name end		3292	0CDC	CALL 1084	; ldbuf
	3116	0C2C	CALL 2307	; indir		3295	0CDF	LD HL, 23611	; flags
	3119	0C2F	LD DE, (8245)	; temp6		3298	0CE2	SET 4, (HL)	; prleft
	3123	0C30	INC DE			3300	0CE4	LD HL, 12804	; start of disk name
	3124	0C34	LD HL, 8260			3303	0CE7	LD A, (HL)	
	3127	0C37	INC HL			3304	0CE9	AND A	
	3128	0C38	LD A, (HL)			3305	0CE9	JR Z, 3311	
	3129	0C39	CP 249	; name end		3307	0CEB	RST 16	
	3131	0C3B	JR Z, 3143			3308	0CEC	INC HL	
	3133	0C3D	CP 245	; block in use		3309	0CED	JR 3303	
	3135	0C3F	JR Z, 3127			3311	0CEF	LD A, 13	
	3137	0C41	LD A, (HL)			3313	0CF1	RST 16	
	3138	0C42	LD (DE), A			3314	0CF2	LD A, 13	
	3139	0C43	INC DE			3316	0CF4	RST 16	
	3140	0C44	INC HL			3317	0CF5	CALL 1063	; 1st byte in chnlis
	3141	0C45	JR 3128			3320	0CF8	CP 244	
	3143	0C47	LD (DE), A			3322	0CFA	JR Z, 3334	; spec
	3144	0C48	LD HL, 8250	; directory		3324	0CFC	CALL 2156	; gtfil
	3147	0C4B	INC HL			3327	0CFF	CALL 1013	; endlon
	3148	0C4C	LD A, 253	; 1st block		3330	0D02	LD A, C	
	3150	0C4E	CP (HL)			3331	0D03	AND A	
	3151	0C4F	JR NZ, 3147			3332	0D04	JR NZ, 3342	
	3153	0C51	INC HL			3334	0D06	LD HL, 8226	; progmm
	3154	0C52	LD (8241), HL	; temp2		3337	0D09	LD (HL), 34	; "
	3157	0C55	LD A, (HL)			3339	0D0B	INC HL	
	3158	0C56	CP 249	; name end		3340	0D0C	LD (HL), 34	; "
	3160	0C58	JR Z, 3180			3342	0D0E	XOR A	
	3162	0C5A	CP 245	; block in use		3343	0D0F	LD (8243), A	; temp4
	3164	0C5C	JR Z, 3153			3346	0D12	LD HL, 8328	
	3166	0C5E	LD HL, 8328			3349	0D15	INC HL	
	3169	0C61	INC HL			3350	0D16	INC HL	
	3170	0C62	CP (HL)			3351	0D17	LD A, (HL)	
	3171	0C63	JR NZ, 3169			3352	0D18	CP 250	; directory end
	3173	0C65	LD (HL), 245	; block in use		3354	0D1A	JR Z, 3423	
	3175	0C67	LD HL, (8241)	; temp2		3356	0D1C	CP 255	; end of track map
	3178	0C6A	JR 3153			3358	0D1E	JR NZ, 3350	
	3180	0C6C	CALL 3651	; savebf		3360	0D20	INC HL	
	3183	0C6F	LD A, (8194)	; nmiflag		3361	0D21	LD A, (HL)	
	3186	0C72	AND A			3362	0D22	CP 254	; cell not used
	3187	0C73	RET NZ			3364	0D24	JR Z, 3350	
	3188	0C74	JP 1596			3366	0D26	LD (8245), HL	; temp6

Oops! These are the missing pages from Les Cottrell's excellent Larken ROM Disassembly. See also vols. 11-2, 11-3, 11-5 & 11-6.

name	Dec	Hex	Instr-Dec	Remarks (10)	name	Dec	Hex	Instr-Dec
	3369	0D29	LD B, 9			3612	0E1C	OUT 22, A
	3371	0D2B	LD DE, 8226	; progrnm		3614	0E1E	LD A, (8202) ; hspd
	3374	0D2E	LD A, (DE)			3617	0E21	OR 20
	3375	0D2F	CP 34	; "		3619	0E23	OUT 16, A
	3377	0D31	JR Z, 3394			3621	0E25	LD B, 10
	3379	0D33	CP 94	; ^ wildcard		3623	0E27	DJNZ 3623
	3381	0D35	JR Z, 3391			3625	0E29	IN A, 16
	3383	0D37	CP (HL)			3627	0E2B	RRA
	3384	0D38	JR Z, 3394			3628	0E2C	JR C, 3625
	3386	0D3A	INC HL			3630	0E2E	RET
	3387	0D3B	DJNZ 3374			3631	0E2F	LD A, (8195) ; dvssel
	3389	0D3D	JR 3350			3634	0E32	LD HL, 8221 ; curtrk
	3391	0D3F	INC DE			3637	0E35	BIT 0, (HL)
	3392	0D40	JR 3374			3639	0E37	JR NZ, 3646
	3394	0D42	LD A, (DE)			3641	0E39	RES 0, A
	3395	0D43	CP 94	; ^ wildcard		3643	0E3B	OUT 8, A
	3397	0D45	JR Z, 3407			3645	0E3D	RET
	3399	0D47	LD A, (DE)			3646	0E3E	SET 0, A
	3400	0D48	CP 34	; "		3648	0E40	OUT 8, A
	3402	0D4A	JR Z, 3411			3650	0E42	RET
	3404	0D4C	CP (HL)		crcsv	3651	0E43	DI
	3405	0D4D	JR NZ, 3350			3652	0E44	LD A, (8195) ; dvssel
	3407	0D4F	INC DE			3655	0E47	CP 128 ; RAMdisk?
	3408	0D50	INC HL			3657	0E49	JP Z, 4066
	3409	0D51	JR 3394			3660	0E4C	CALL 3666
	3411	0D53	LD HL, 8243	; temp4		3663	0E4F	CALL 3675
	3414	0D56	INC HL			3666	0E52	LD BC, 4500
	3415	0D57	LD HL, (8245)	; temp6		3669	0E55	DEC BC
	3418	0D5A	CALL 3191			3670	0E56	LD A, B
	3421	0D5D	JR 3350			3671	0E57	OR C
	3423	0D5F	LD HL, 3493	; LARKEN LKDOS 1986		3672	0E58	JR NZ, 3669
	3426	0D62	CALL 1922	; print to		3674	0E5A	RET
	3429	0D65	LD A, (8325)			3675	0E5B	LD E, 20
	3432	0D68	CALL 1781	; decdmp		3677	0E5D	LD B, 1
	3435	0D6B	LD A, 47			3679	0E5F	LD C, 20
	3437	0D6D	RST 16			3681	0E61	LD HL, 8304
	3438	0D6E	LD A, (8324)	; vars offset		3684	0E64	IN A, 16
	3441	0D71	CALL 1781	; decdmp		3686	0E66	RRA
	3444	0D74	LD HL, 3526	; total files		3687	0E67	JR C, 3684
	3447	0D77	CALL 1922	; print to .		3689	0E69	OUT (C), B
	3450	0D7A	LD A, (8243)	; temp4		3691	0E6B	LD A, 180
	3453	0D7D	CALL 1781	; decdmp		3693	0E6D	OUT 16, A
	3456	0D80	LD HL, 3539	; free blocks		3695	0E6F	LD B, 6
	3459	0D83	CALL 1922	; print to .		3697	0E71	LD C, 22
	3462	0D85	LD HL, 8328			3699	0E73	DJNZ 3699 ; delay
	3465	0D89	INC HL			3701	0E75	LD D, (HL)
	3466	0D8A	LD C, 0			3702	0E76	INC HL
	3468	0D8C	LD A, (HL)			3703	0E77	IN A, 16
	3469	0D8D	CP 255	; end of track map		3705	0E79	RRA
	3471	0D8F	JR Z, 3483			3706	0E7A	RET NC
	3473	0D91	CP 245	; block used		3707	0E7B	RRA
	3475	0D93	CALL NZ, 3481			3708	0E7C	JR NC, 3703
	3478	0D96	INC HL			3710	0E7E	OUT (C), D
	3479	0D97	JR 3468			3712	0E80	DJNZ 3701
	3481	0D99	INC C			3714	0E82	DEC E
	3482	0D9A	RET			3715	0E83	JR NZ, 3701
	3483	0D9B	LD A, C			3717	0E85	LD C, 16
	3484	0D9C	CALL 1781	; decdmp		3719	0E87	LD B, 208
	3487	0D9F	LD A, 13			3721	0E89	IN A, 20
	3489	0DA1	RST 16			3723	0E8B	CP 11
	3490	0DA2	JP 1596			3725	0E8D	JR Z, 3734
	3493	"LARKEN LKDOS 1986"		; <pointer @ 3423		3727	0E8F	IN A, 16
	3512	"Track/Side"		; <pointer @		3729	0E91	RRA
	3525	"Total Files"		; <pointer @ 3444		3730	0E93	JR C, 3721
	3539	"Free Blocks"		; <pointer @ 3456		3732	0E94	JR 3743
	3552	0DE0	LD HL, 3558			3734	0E96	OUT (C), B
	3555	0DE3	JP 1822	; doserr		3736	0E98	LD B, 8
	3558	"Y File Open"		; <pointer @ 3552		3738	0E9A	DJNZ 3738 ; delay
trac	3571	0DF3	LD A, (8195)	; drvssel		3740	0E9C	IN A, 16
	3574	0DF6	CP 128	; RAMdisk		3742	0E9E	RRA
	3576	0DF8	RET Z			3743	0E9F	AND 46
	3577	0FD9	OUT 8, A			3745	0EA1	RET NZ
	3579	0FDB	LD A, (8203)			3746	0EA2	SCF
	3582	0DFE	SET 2, A			3747	0EA3	RET
	3584	0E00	OUT 16, A			3748	0EA4	LD E, 20
	3586	0E02	LD B, 20			3750	0EA6	LD B, 1
	3588	0E04	DJNZ 3588	; delay		3752	0EA8	DI
	3590	0E06	IN A, 16			3753	0EA9	LD C, 20
	3592	0E08	BIT 0, A			3755	0EAB	LD HL, 8304
	3594	0E0A	JR Z, 3598			3758	0EAE	IN A, 16
	3596	0E0C	JR 3590			3760	0EB0	RRA
	3598	0E0E	IN A, 16			3761	0EB1	JR C, 3758
	3600	0E10	RRA			3763	0EB3	OUT (C), B
	3601	0E11	JR C, 3598			3765	0EB5	LD A, 148
	3603	0E13	CALL 3631			3767	0EB7	OUT 16, A
	3606	0E16	LD A, (8221)	; track		3769	0EB9	LD B, 7
	3609	0E19	RRA			3771	0EBB	LD C, 32
	3610	0E1A	RES 7, A			3773	0EBD	DJNZ 3773 ; delay

name	Dec	Hex	Instr-Dec	Remarks (11)	name	Dec	Hex	Instr-Dec	Remarks
	3775	0EBF	IN A, 16			3919	0F4F	INC HL	
	3777	0EC1	RRA			3920	0F50	LD (HL), 254	; cell not used
	3778	0EC2	RET NC			3922	0F52	ADD HL, BC	
	3779	0EC3	RRA			3923	0F53	LD (HL), 253	; 1st block
	3780	0EC4	JR NC, 3775			3925	0F55	INC HL	
	3782	0ECE	INI			3926	0F56	LD (HL), 249	; name end
	3784	0EC8	JR NZ, 3775			3928	0F58	ADD HL, DE	
	3786	0ECA	DEC E			3929	0F59	LD (HL), 255	; end of track map
	3787	0ECB	JR NZ, 3775			3931	0F5B	DEC A	
	3789	0ECD	LD A, 208			3932	0F5C	JR NZ, 3917	
	3791	0ECF	OUT 16, A			3934	0F5E	LD (HL), 250	; directory end
	3793	0ED1	LD B, 7			3936	0F60	RET	
	3795	0ED3	DJNZ 3795	; delay		3937	0F61	XOR A	
	3797	0ED5	IN A, 16			3938	0F62	LD (8320), A	
	3799	0ED7	RRA			3941	0F65	LD E, A	
	3800	0ED8	JR C, 3797			3942	0F66	LD HL, 8304	
	3802	0EDA	AND 14			3945	0F69	LD BC, 5120	
	3804	0EDC	RET NZ			3948	0F6C	LD A, E	
	3805	0EDD	SCF			3949	0F6D	ADD A, (HL)	
	3806	0EDE	RET			3950	0F6E	LD E, A	
nexttrk	3807	0EDF	LD HL, 8221	; curtrk		3951	0F6F	INC HL	
	3810	0EE2	LD A, (8195)	; nmiflag		3952	0F70	DEC BC	
	3813	0EE5	CP 128			3953	0F71	LD A, B	
	3815	0EE7	JR Z, 3844			3954	0F72	OR C	
	3817	0EE9	LD A, (HL)			3955	0F73	JR NZ, 3948	
	3818	0EEA	BIT 0, A			3957	0F75	LD A, E	
	3820	0EEC	JR Z, 3839			3958	0F76	LD (8225), A	
	3822	0EEF	IN A, 16			3961	0F79	RET	
	3824	0EF0	RRA		FORMAT	3962	0F7A	CALL 2444	; wprot
	3825	0EF1	JR C, 3807			3965	0F7D	LD HL, 8226	; progrm
	3827	0EF3	LD A, (8202)			3968	0F80	LD B, 10	
	3830	0EF6	OR 80			3970	0F82	LD (HL), 0	
	3832	0EF8	OUT 16, A			3972	0F84	INC HL	
	3834	0EFA	IN A, 16			3973	0F85	DJNZ 3970	
	3836	0EFC	RRA			3975	0F87	XOR A	
	3837	0EFD	JR C, 3834			3976	0F88	LD (8221), A	; curtrk
	3839	0EFF	INC (HL)			3979	0F8B	LD (8224), A	; errnu
	3840	0F00	CALL 3631			3982	0F8E	CALL 1121	; clrbf
	3843	0F03	RET			3985	0F91	CALL 3848	
	3844	0F04	INC (HL)			3988	0F94	LD DE, 12804	; start of disk name
	3845	0F05	RET			3991	0F97	LD HL, 4039	; "RAM-DISK"
	3846	0F06	RST 8, ERR 11 ; integer out of range			3994	0F9A	LD BC, 16	
	3848	0F08	RST 32 ; next char			3997	0F9D	LDIR	
	3849	0F09	LD HL, (23645); chadd			3999	0F9F	CALL 3651	; savebf
	3852	0F0C	INC HL			4002	0FA2	CALL 1084	; ldbuf
	3853	0F0D	LD A, (HL)			4005	0FA5	CALL 3807	; nexttrk
	3854	0F0E	CP 57			4008	0FA8	CALL 1121	; clrbf
	3856	0F10	JR NC, 3846 ; integer out of range			4011	0FAB	LD HL, 8304	
	3658	0F12	CP 49			4014	0FAE	LD (HL), 255	
	3660	0F14	OR C, 3846 ; integer out of range			4016	0FBO	INC HL	
	3662	0F16	LD B, 48			4017	0FB1	LD A, (8221)	; curtrk
	3664	0F18	SUB B			4020	0FB4	LD (HL), A	
	3865	0F19	LD B, A			4021	0FB5	CALL 3651	; savbf
	3866	0F1A	LD C, 6			4024	0FB8	CALL 1084	; ldbuf
	3868	0F1C	XOR A			4027	0FBB	LD A, (8221)	; curtrk
	3869	0F1D	ADD A, C			4030	0FBE	LD HL, 8205	
	3870	0F1E	DJNZ 3869			4033	0FC1	CP (HL)	
	3872	0F20	DEC A			4034	0FC2	JR NZ, 4005	
	3873	0F21	LD (8205), A			4036	0FC4	JP 1596	
	3876	0F24	LD B, A			4039	" RAM-DISK"		; >pointer @ 3961
	3877	0F25	INC A			4051	0FD3	LD HL, 32768	
	3878	0F26	SRL A			4054	0FD6	LD A, (8024)	; raddr
	3880	0F28	LD HL, 8324 ; var offset			4057	0FD9	INC A	
	3883	0F2B	LD (HL), 2			4058	0FDA	LD BC, 5120	
	3885	0F2D	INC HL			4061	0FDC	DEC A	
	3886	0F2E	LD (HL), A			4062	0FDE	RET Z	
	3887	0F2F	LD HL, 8328			4063	0FDF	ADD HL, BC	
	3890	0F32	LD A, 245 ; block used			4064	0FE0	JR 4061	
	3892	0F34	LD (HL), A			4066	0FE2	CALL 3937	
	3893	0F35	LD A, 1			4069	0FE5	LD A, (8225)	
	3895	0F37	INC HL			4072	0FE8	LD (8320), A	
	3896	0F38	LD (HL), A			4075	0FEB	CALL 4147	
	3897	0F39	INC A			4078	0FEE	SET 6, A	; write protect off
	3898	0F3A	DJNZ 3895			4080	0FF0	OUT 7, A	
	3900	0F3C	LD B, 100			4082	0FF2	CALL 4051	
	3902	0F3E	LD A, 245 ; block used			4085	0FF5	IN A, 244	; hor sel reg
	3904	0F40	INC HL			4087	0FF7	EX AF, AF'	
	3905	0F41	LD (HL), A			4088	0FF8	LD A, 240	; enable upper 32K
	3906	0F42	DJNZ 3904			4090	0FFA	OUT 244, A	; of dock bank
	3908	0F44	INC HL			4092	0FFC	LD DE, 8304	; start of a block
	3909	0F45	LD A, 55			4095	0FFF	EX DE, HL	
	3911	0F47	LD BC, 9			4096	1000	LDIR	
	3914	0F4A	LD DE, 23			4098	1002	EX AF, AF'	
	3917	0F4D	LD (HL), 255 ; end of track map			4099	1003	OUT 244, A	; hor sel reg

name	Dec	Hex	Instr-Dec	Remarks (12)	name	Dec	Hex	Instr-Dec	
	4101	1005	XOR A		4323	10E3	LD HL, 8226	; progm	
	4102	1006	OUT 7, A		4326	10E6	LD DE, 8306	; name track buffer	
	4104	1008	RET		4329	10E9	LD BC, 9		
drv4	4105	1009	CALL 4147		4332	10EC	LDIR		
	4108	100C	OUT 7, A		4334	10EE	CALL 120	; savebf	
	4110	100E	CALL 4051		4337	10F1	POP HL		
	4113	1011	IN A, 244		4338	10F2	INC HL		
	4115	1013	EX AF, AF'		4339	10F3	JR 4290		
	4116	1014	LD A, 240	; enable upper 32K	4341	10F5	LD HL, 4307	; "Z Name Exists"	
	4118	1016	OUT 244, A	; of dock bank	4344	10F8	JP 1822	; doserr	
	4120	1018	LD DE, 8304	; track buffer	4347	"Z Name Exists"			
	4123	101B	LDIR		4362	110A	NOP		
	4125	101D	EX AF, AF'			to		; all NOP's	
	4126	101E	OUT 244, A		4399	112F	NOP		
	4128	1020	XOR A		4400	1130	JR 4409		
	4129	1021	OUT 7, A		4402	1132	JP 4474		
	4131	1023	LD A, (8320)		4405	1135	POP AF		
	4134	1026	PUSH AF		4406	1136	POP HL		
	4135	1027	CALL 3937		4407	1137	JR 4509		
	4138	102A	LD HL, 8225		4409	1139	CP 211	; OPEN #	
	4141	102D	POP AF		4411	113B	JP Z, 4537		
	4142	102E	CP (HL)		4414	113E	CP 212	; CLOSE #	
	4143	102F	RET Z		4416	1140	JP Z, 4846		
	4144	1030	JP 1100		4419	1143	CP 213	; MERGE	
	4147	1033	LD A, (8221)	; curtrk	4421	1145	JP Z, 7565		
	4150	1036	LD C, A		4424	1148	CP 214	; VERIFY	
	4151	1037	LD B, 0		4426	114A	JP Z, 6491		
	4153	1039	LD HL, 4175	; chip select table	4429	114D	CP 216	; CIRCLE	
	4156	103C	ADD HL, BC		4431	114F	JP Z, 6952		
	4157	103D	LD A, (HL)		4434	1152	CP 217	; INK	
	4158	103E	LD C, A		4436	1154	JP Z, 5517		
	4159	103F	AND 7		4439	1157	CP 218	; PAPER	
	4161	1042	LD (8204), A	; raddr	4441	1159	JP Z, 5514		
	4164	1044	LD A, C		4444	115C	CP 236	; GO TO	
	4165	1045	RRA		4446	115E	JP Z, 5610		
	4166	1046	RRA		4449	1161	CP 238	; INPUT	
	4167	1047	RRA		4451	1163	JP Z, 5356		
	4168	1048	RRA		4454	1166	CP 244	; POKE	
	4169	1049	AND 7		4456	1168	JP Z, 5594		
	4171	104B	LD (8203), A	; rbank	4459	116B	CP 245	; PRINT	
	4174	104E	RET		4461	116D	JP Z, 5308		
	4175	70 71 72 73 74 75 30 31 32 33 34 35			4464	1170	CP 252	; DRAW	
		50.. 10.. 60.. 20.. 40.. 00.....05			4466	1172	JP Z, 6667		
MOVE	4223	107F	CALL 2444	; wprot	4469	1175	CP 253	; CLEAR	
	4226	1082	CALL 156	; gtfil	4471	1177	JP Z, 6285		
	4229	1085	LD A, 32		4474	117A	LD HL, 4480	; "W Invalid Command	
	4231	1087	LD (DE), A		4477	117D	JP 174	; print message	
	4232	1088	CALL 132	; indir	4480	"W Invalid Command"	; >pointer @ 4474		
	4235	108B	LD A, (8234)	; errnu	4499	1193	LD HL, 23623	; subppc	
	4238	108E	CP 10		4502	1196	INC (HL)		
	4240	1090	JP Z, 2127		4503	1197	CALL 141	; endln	
	4243	1093	CALL 156	; gtfil	4506	119A	JP 186	; jpout	
	4246	1096	LD A, 32		4509	119D	PUSH HL		
	4248	1098	LD (DE), A		4510	119E	PUSH BC		
	4249	1099	LD DE, (8241)	; temp2	4511	119F	PUSH AF		
	4253	109D	INC DE		4512	11A0	LD A, D		
	4254	109E	PUSH DE		4513	11A1	CP 3		
	4255	109F	CALL 2343		4515	11A3	JP Z, 7854		
	4258	10A2	LD A, (8224)	; errnu	4518	11A6	CP 4		
	4261	10A5	CP 10		4520	11A8	JP Z, 5066		
	4263	10A7	JR NZ, 4341	; "Z Name Exists"	4523	11AB	CP 5		
	4265	10A9	POP DE		4525	11AD	JP Z, 5298		
	4266	10AA	LD HL, 8226		4528	11B0	CALL 6251		
	4269	10AD	LD BC, 9		4531	11B3	POP AF		
	4272	10B0	LDIR		4532	11B4	POP BC		
	4274	10B2	EX DE, HL		4533	11B6	POP HL		
	4275	10B3	LD DE, 13430		4534	11B6	JP 5650		
	4278	10B6	PUSH DE		OPEN#	4537	11B9	RST 32	; next char
	4279	10B7	LD BC, 50		4538	11BA	CALL 144	; evalu	
	4282	10BA	LDIR		4541	11BD	LD A, B		
	4284	10BC	CALL 120	; savebf	4542	11BE	AND A		
	4287	10BF	POP DE		4543	11BF	JR NZ, 4554	; err 11	
	4288	10C0	INC DE		4545	11C1	LD A, C		
	4289	10C1	EX DE, HL		4546	11C2	CP 2		
	4290	10C2	LD A, (HL)		4548	11C4	JR C, 4554	; err 11	
	4291	10C3	CP 249	; name end	4550	11C6	CP 16		
	4293	10C5	JP Z, 1596		4552	11C8	JR C, 4556		
	4296	10C8	PUSH HL		4554	11CA	RST 8 ERR 11	; integer out range	
	4297	10C9	LD (8240), A	; temp1	4556	11CC	LD (13434), A		
	4300	10CC	CALL 129	; nexttr	4559	11CF	LD (8240), A	; temp1	
	4303	10CF	LD A, (8221)	; curtrk	4562	11D2	CALL 156		
	4306	10D2	LD HL, 8240	; temp1	4565	11D5	LD A, 34		
	4309	10D5	CP (HL)		4567	11D7	LD (DE), A		
	4310	10D6	JR NZ, 4300		4568	11D8	PUSH DE		
	4312	10D8	CALL 123	; loadbf	4569	11D9	POP BC		
	4315	10DB	LD A, (8224)	; errnu	4570	11DA	LD HL, 8226	; progm	
	4318	10DE	CP 25		4573	11DD	EX DE, HL		
	4320	10EC	JP Z, 2320		4574	11DE	OR A		

Monday, 17 January 1994
22 2nd Ave. N.
St. Mathieu, Que.
J0L 2H0

G. Chambers
Toronto TSUG
14 Richome Court
Scarborough, Ont.
M1K 2Y1

Dear George

I did not originally intend to set prices as it is difficult to establish the real value. However, many people have asked for prices so I set some with the understanding that I would consider the best offer. Prices do not include shipping for obvious reasons. I am sending you a copy in case anyone in Toronto area is interested.

I would not object to selling items such as the modem , monitor, microdrive or software groups separately but would like to keep the basic system intact as a spectrum without the disk system is less attractive. However, I am not adamant about that.

I have moved up to a 386 DX 40 running windows and do not have the time to devote to two operating systems even though I am retired , also at my age it is harder switching between the two different systems.

PS : You must have two different computer lists for members as you misspelled my last name in the last issue of SINC-LINK although it appears correct on the mailing labels.

Yours Truly



Keith Worrell

<u>PROGRAM</u>	<u>ORIG COST</u>	<u>PRICE</u>
FIGHTER PILOT (Spectrum)	\$ 16.95 US	\$ 6.00
MTERM II (Terminal software) with	\$ 24.95 US }	\$ 15.00
LOADER V (add-on for MTerm)	? }	
B. Carter Smart II manual)	\$ 6.95 US }	
SPECTERM 64 (Terminal software)	\$ 30.00 US	\$ 10.00
PROFILE 2068 - DATABASE (THOMAS WOODS)	\$ 29.95 US	\$ 10.00
CASBOARD 2068 (flexible BBS)	\$ 19.95 US	\$ 6.00
THE WORX - NOVELSOFT (DESKTOP PGM)	\$ 19.95 US	\$ 10.00
(planner/notepad/tel book/calc/clock/biorythms/perp cal)		
PIXEL PRINT PLUS DESKTOP PUBLISHER (\$ 25.00 compl.)	\$ 10.00 US	\$ 5.00
FONT PACK 1	\$ 19.95 US	\$ 6.00
ICON PACK	\$ 19.95 US	\$ 6.00
FONT LIBRARY 1	\$ 19.95 US	\$ 6.00
CLIP ART ICON LIBRARY VOL I	\$ 19.95 US	\$ 6.00
PIXEL SKETCH & GRAPHICS EDITOR	\$ 19.95 US	\$ 6.00
TIMEGATE (game)	\$ 16.99 US	\$ 6.00
SPEECH SYNTHESIZER	\$ 16.95 US	\$ 6.00
MSCRIP (WORDPROCESSOR)	\$ 23.95 US	\$ 8.00
TASWORD II (WORDPROCESSOR) with	\$ 24.95 US }	\$ 10.00
TASPATCH (update for Tasword to 2+)	\$ 9.95 US }	
TASWORD KEYBOARD OVERLAY	\$ 5.95 US }	
PERSONAL ACCOUNTANT (SOFTSYNC)	?	\$ 6.00
007 SPY (Spectrum program for making backup copies)	?	\$ 6.00
UPLOAD 2000 (loads basic TS 1000)	\$ 21.90 US	\$ 5.00

<u>PROGRAM</u>	<u>ORIG. COST</u>	<u>PRICE</u>
ZEUS ASSEMBLER	\$ 19.95 US	\$ 6.00
ZEAL DISASSEMBLER	?	\$ 6.00
ZEUS MONITOR DISASSEMBLER	?	\$ 6.00
ZIP COMPILER	\$ 16.96 US	\$ 5.00
COMPLETE MACHINE CODE TUTOR	\$ 19.95 US	\$ 6.00
HOT Z (assembl/disassem/editor)	\$ 14.95 US	\$ 5.00
BYTE POWER MAGAZINE (13 TAPES AUG 86 - WINTER 89)		\$ 10.00

<u>BOOKS</u>	<u>ORIG. COST</u>	<u>PRICE</u>
TIMEX SINCLAIR TECHNICAL MANUAL	\$ 25.00 US	\$ 10.00
TS 2068 BASICS AND BEYOND	\$ 9.95 US	\$ 5.00
POWERFUL PROJECTS WITH YOUR TIMEX SINCLAIR	\$ 12.95 US	\$ 5.00
ESSENTIAL GUIDE TO TS HOME COMPUTING	\$ 8.95 US	\$ 3.00
INSIDE THE TIMEX SINCLAIR 2000	\$ 11.95 US	\$ 4.00
TS 2068 BEGINNER/INTERMEDIATE GUIDE (SAMS)	\$ 9.95 US	\$ 5.00
TS 2068 INTERMEDIATE/ADVANCED GUIDE (SAMS)	\$ 9.95 US	\$ 5.00
TS USER GROUP GUIDE TO TELECOMMUNICATIONS	\$ 7.50 US	\$ 3.00



TIMEX SINCLAIR TS-2068 COMPUTER

<u>HARDWARE</u>	<u>ORIG. COST</u>	<u>PRICE</u>
TS-2068 COMPUTER with SPECTRUM ROM SWITCH (installed)	\$ 159.00 US } ? }	\$ 50.00
AERCO PRINTER INTERFACE CP 2068	\$ 54.95 US	\$ 14.00
MONITOR MAGNAVOX COLOR	\$ 206.88 US	\$ 50.00
LARKEN DOS SYSTEM W/RAMDISK and 5 1/4 DISK DRIVE AND POWER SUPPLY	\$ 331.00 CAN } \$ 100.00 US }	\$ 125.00
TS-2050 MODEM (compl. w/manual)	?	\$ 30.00
WC 2050 MODEM BOARD AND EXPER. GUIDE	?	\$ 5.00
A&J MICRODRIVE MODEL 2000 with PRINTER INTERFACE & 14 CASSETTES)	\$ 149.95 US } ? }	\$ 30.00
WINKY 2000 (tape loading aid)	\$ 22.95 US	\$ 5.00
MORSE CODE TRANSLATOR (THOMAS WOODS) (CASSETTE & HARDWARE INCL. I/O PORT)	\$ 16.95 US } \$ 69.95 US }	\$ 20.00
<u>PROGRAMS</u>		<u>PRICE</u>
HACKER (Spectrum game)	\$ 12.95 US	\$ 5.00
TIMEX FLIGHT SIMULATOR	\$ 11.00 US	\$ 5.00
MUSICOLA (music tools)	\$ 24.95 US	\$ 10.00
BRITAIN INVADED	\$ 18.95 US	\$ 8.00
NIGHT GUNNER (Spectrum)	\$ 15.95 US	\$ 6.00
TOMAHAWK (Spectrum)	\$ 15.99 US	\$ 6.00
VOICE CHESS	?	\$ 6.00
DIAMOND MIKE II	\$ 16.95 US	\$ 6.00

FOR SALE

\$200 (U.S.) FOR ALL

HARDWARE

3 QL Computers with power supplies (one needs keyboard membrane)
QL Trump Card
QL Printer
Seikosha SP-1200 Printer
2- Amber Monitors
2- keyboard dust covers
2 joysticks

SOFTWARE

QL Project Planner
QL Entrepreneur
QL Decision Maker
QL Monitor
QL Cavern
Psion Chess
Sign Designer
Touch Typist
The Lost Kingdom of Zkul
3 D Slime

QL Peintre
Mortville Manor
Wanderer
Tank Busters
Mailbag
Spellbound
Recipe
Utility
Agenda
Locksmith

BOOKS

Quill, Easel, Archive & Abacus on the Sinclair QL
The Sinclair QL Series
 Advanced Programming with the Sinclair QL
 Introduction to Superbasic on the Sinclair QL
 Using Graphics on the Sinclair QL
 Database Management on the Sinclair QL
 Word Processing with the Sinclair QL
 Making the Most of the Sinclair QL
Blueprint
 QL Easel
 QL Quill
 QL Abacus

PERIODICALS & MAGAZINES

Quantum Levels: Vol 1, No. 1 thru Vol 2, No.5
Update: OCT 88, JAN 89, APR 89, JUL 89, JAN 90, JUL 90 & OCT 90
The QL Report: July 85 thru Oct 88
Sinclair QL World: JUN 85 thru AUG 90 (Missing MAR, APR 86, OCT 86, SEP87, MAR 88, JAN 89, JUL AUG 90)
QUANTA : JAN 86 thru DEC 90

MANUALS

QL Service Manual
QL Technical Manual
QL Printer Manual

2 - QL User Guides
Trump Card Manual

James V. Hageman
8868 Cayuga Drive
Niagara Falls, NY 14304
(716) 297-5685

Dear OOT Members:

Just a short note this month. This is a list of items which a non-member is offering for sale. QL owners might be especially interested. James says to give him a phone call if interested.

I've been answering a lot of old correspondence. If you are waiting for something from me, and have not received it, drop me a line and remind me.

Sincerely, George Chambers

Jeff Taylor
75 Lemonwood Drive,
Unit 335
Islington, Ontario
CANADA M9A 4L3

28 January 1994

Mr. Les Cottrell
108 River Heights Drive,
Cocoa, Florida
U.S.A. 32922-6630

Dear Les,

First of all, allow me to apologize for taking so long to respond to your letter. I've been carrying it around in my briefcase for almost three months, always intending to get-around-to-it but never actually sitting down to type this. Anyway, sorry for the delay.

Second, I would like to thank you for making the effort to continue producing excellent articles for all the newsletters you write for. I know your articles are appreciated and I thought you ought to know.

Third, despite what George has written in his out-of-town letters, the club and newsletter are not about to fold. George has been involved in the club since its inception and all the phone calls, writing and mailings are starting to take their toll (He's in his seventies). This and the feeling that there isn't that much more to write about the 2068 and Larken system and his recent exposure to DOS machines have all contributed to a dwindling interest on his part. Nobody blames him, after all, he has pretty much run this club by himself for a long time and now he wants to move on.

The trouble is, there's no one to replace him! The other club movers are Bill Lawson, Rene Bruneau, Hugh Howie and myself. Bill is practically and legally blind and Rene and I have young families

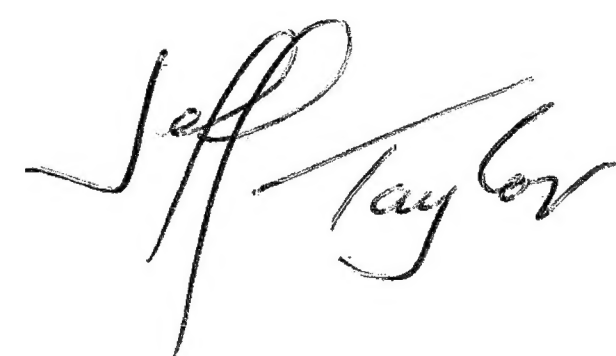
and careers to occupy most of our time. Hugh is a QLer exclusively and has no interest in the smaller Sinclair computers. So, what to do? We need a retiree to devote all his time to minding the day-to-day operations. Want to move to Toronto? Anyway, Rene and I have decided to continue as best we can when George finally says he's had enough.

Fourth, by now you have seen the November-December '93 issue and realized that we (oops, I mean I) have missed issuing a section of your LKDOS disassembly. My fault and I'm embarrassed to admit that the missing section cannot be located. So, with head hung low, I'm going to ask if you would send another copy of your complete disassembly. I will publish the part left out and ensure that the complete document goes into a binder for our paper library.

That's about it other than to say thanks for your support and keep up the good work

That's all for now...

Regards,

A handwritten signature in cursive script that reads "Jeff Taylor". The signature is written in dark ink and is positioned below the typed name "Jeff Taylor".